

REMARKS

In accordance with the foregoing, claims 5, 6, 13, and 14 are cancelled without prejudice or disclaimer and claims 1, 9, 10, 17, 19, 20, 25, 27, 28, and 33 are amended. Accordingly, claims 1-4, 7-12, and 15-40 are pending and under consideration.

Rejection of claims 1- 40 Under 35 U.S.C. § 103(a)

The Office Action rejects claims 1-40 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 7,092,334 issued to Choi et al. (hereinafter referred to as "Choi") in view of U.S. Patent No. 5,956,307 issued to Koudo et al. (hereinafter referred to as "Koudo"). This rejection is respectfully traversed.

Claims 5, 6, 13, and 14 are cancelled without prejudice or disclaimer.

Choi and Koudo, taken separately or in combination, do not disclose, teach, or suggest at least, "wherein the adjusted constant angular velocity is one step or two steps lower than the predetermined constant angular velocity, according to an extent of the data recording error," as recited in independent claims 1, 9, 17, 25, and 33.

Choi discloses a method of detecting a defect area of a disk, so that unnecessary speed reduction can be eliminated and data can be written even in a defective area. In Figure 5 and col. 3, line 61 through col. 4, lines 5, Choi discloses,

"If successfully-decoded ATIP data is not received for a while or the ATIP_sync signal is not received (S50), the microcomputer 80 considers that this unstable recording state is caused from a defect of current recording area, thus it conducts a buffer underrun preventing function, requests stop of data transmission to the external host, and suspends recording temporarily.

After that, the microcomputer 80 reduces current recording speed adequately through the servo unit 70 and the driving unit 71 (S51) and it moves the pickup 20 to the record-suspended point and resumes the recording operation at that point (S52)."

In item 2 on page 2 of the Office Action mailed February 22, 2007, the Office Action notes that Choi does not disclose "constant angular velocity" as recited in claims 1, 9, 17, 25, and 33.

In item 2 on page 2 of the Office Action mailed February 22, 2007, the Office Action asserts, "Koudo discloses a device for controlling the rotation of an optical disc wherein the disc is rotated at a constant angular velocity." However, Koudo does not cure the deficiencies of Choi as discussed below.

Col. 32, lines 30-35 of Koudo discloses, "In an extreme case, a disk is rotated at a constant angular velocity. In this case, the power consumption and heat generation of the motor can be suppressed to a very low level as compared with the prior art case of constant linear velocity reproduction." Although Koudo discloses a disk rotated at a constant angular velocity, Koudo does not, "wherein the adjusted constant angular velocity is one step or two steps lower than the predetermined constant angular velocity, according to an extent of the data recording error," as recited in claims 1, 9, 17, 25, and 33.

In item 2 on pages 2-3 of the Office Action mailed February 22, 2007, the Office Action asserts, "It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the recording device as disclosed by Choi with the rotation controlling device as disclosed by Koudo, the motivation being to lower power consumption and lessen heat generation within the drive." This assertion is respectfully traversed.

As indicated in col. 1, lines 45 through 50, the object of Choi is to provide a method of detecting a defect area of a writable disk more exactly in order to ensure successful data writing on a defect area through timely recording speed reduction. In contrast, Koudo teaches rotating a disk at a constant angular velocity to reduce power consumption and heat generation of the motor (col. 32, lines 30-35). Therefore, one having ordinary skill in the art at the time of the invention would not have been motivated to combine Koudo with Choi.

In response to these arguments, page 5 of the present Office Action asserts that Koudo's Abstract indicates that a phase error signal is fed to the spindle motor to regulate speed in a constant linear velocity (CLV) mode. The Office Action asserts, "the combination of Choi and Koudo is valid since Choi clearly discloses altering the rotation speed of a disc based on signal error and Koudo discloses both constant angular velocity (CAV) and CLV rotation and the switching between CLV and CAV in order to conserve power and regulate heat generation."

Applicants respectfully submit that Choi and Koudo, taken separately or in combination, do not disclose, teach, or suggest at least, "wherein the adjusted constant angular velocity is one step or two steps lower than the predetermined constant angular velocity, according to an extent of the data recording error," as recited in claims 1, 9, 17, 25, and 33.

Koudo does not disclose a device for controlling the rotation of an optical disc, wherein the disc is rotated at a constant angular velocity. Col. 32, lines 30-35 of Koudo only disclose the advantages of constant angular velocity. Col. 32, lines 35-38 of Koudo disclose the disadvantages of constant angular velocity. Accordingly, Koudo only discloses the advantages and disadvantages of constant angular velocity. Koudo does not disclose, "wherein the adjusted

constant angular velocity is one step or two steps lower than the predetermined constant angular velocity, according to an extent of the data recording error," as recited in claims 1, 9, 17, 25, and 33. Koudo does not disclose, teach, or suggest performing the method step using an adjusted constant angular velocity one step or two steps lower than the predetermined constant angular velocity, according to an extent of the data recording error.

Therefore, for at least these reasons, claim 1 is patentably distinguishable over the cited references.

Claims 2, 3, 4, 7, 8 and 37 depend from claim 1 and include all of the features of claim 1. Therefore, for at least these reasons, claims 2, 3, 4, 7, 8, and 37 are also patentably distinguishable over the cited references.

Claims 10, 11, 12, 15, 16, and 38 depend from claim 9 and include all of the features of claim 9. Therefore, for at least these reasons, claims 10, 11, 12, 15, 16, and 38 are also patentably distinguishable over the cited references.

Claims 18-24 and 39 depend from claim 17 and include all of the features of claim 17. Therefore, for at least these reasons, claims 18-24 and 39 are also patentably distinguishable over the cited references.

Claims 26-32 and 40 depend from claim 25 and include all of the features of claim 25. Therefore, for at least these reasons, claims 26-32 and 40 are also patentably distinguishable over the cited references.

Claims 34-36 depend from claim 33 and include all of the features of claim 33. Therefore, for at least these reasons, claims 34-36 are also patentably distinguishable over the cited references.

Accordingly, withdrawal of this rejection is respectfully requested.

Summary

Claims 1-4, 7-12, and 15-40 are pending and under consideration. It is respectfully submitted that none of the references taken alone or in combination disclose the present claimed invention

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.


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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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